

IN THE CLAIMS:

Please amend the claims as shown in the following claims listing.

18. (Currently amended) A node in an interconnect link system comprising:
a first buffer for receiving a first data segment passing a first criteria based on a predetermined one or more bits for the first segment;
a second buffer for receiving a second data segment passing a second criteria based on the predetermined one or more bits for the second segment;
a first crossbar for ~~receiving routing~~ the first data segment from the first buffer to any of one or more transmitters; and
a second crossbar for ~~receiving routing~~ the second data segment from the second buffer to any of the one or more transmitters, such that the first data segment and the second data segment are routed to the one or more transmitters in one clock cycle in the node.
19. (Previously presented) A node as recited in claim 18 further comprising a data packet having a plurality of bits, the predetermined one or more bits being a stripe bit wherein the stripe bit is used for determining the appropriate buffer to sort data segments into.
20. (Original) A node as recited in claim 18 further comprising a receiver capable of sorting a plurality of received data segments based on the predetermined one or more bits in a data segment.
21. (Original) A node as recited in claim 18 further comprising a transmitter having an arbitrator to decide which data segment to transmit.
22. (Original) A node as recited in claim 18 wherein the first buffer and the second buffer are in a receiver.

23. (Currently amended) A method of routing [a] received data packets through a node, the method comprising:

receiving, from an input line, [a] data packets at a receiver in the node;

examining the data packets based on one or more categorical bits in the data packet;

sorting the data packets to one of a plurality of buffers a first buffer and a second buffer based on the one or more categorical bits in the data packet; and

connecting the data packets from the first buffer with any of a plurality of transmitters via a first crossbar;

connecting the data packets from the second buffer with any of the plurality of transmitters via a second crossbar; and

transmitting data packets routed from first buffer and the second buffer through the first and second crossbar inputting the data packet to one or more crossbars, a crossbar corresponding to a buffer, and routing the data packet to transmitter such that two data packets can be processed by the node in one clock cycle.

24. (Original) A method as recited in claim 23 wherein examining the data packet further includes determining whether a stripe bit in the data packet is zero or one.

25. (Original) A method as recited in claim 23 wherein sorting the data packet further includes routing the data packet to a first buffer if the one or more categorical bits meets a first criteria and routing the data packet to a second buffer if the one or more categorical bits meets a second criteria.

26. (Original) A method as recited in claim 25 wherein the first criteria is that one or more of the categorical bits be a zero and the second criteria is that one or more of the categorical bits be a one.

27. (Original) A method as recited in claim 23 wherein inputting the data packet to one or more crossbars further comprises routing the data packet to a transmitter.

28. (Original) A method as recited in claim 23 further comprising maintaining the order of sequential data packets passing through one of the plurality of buffers.

31. (Previously presented) A routing node suitable for use in a network that carries data packets, the routing node having a plurality of input lines and a plurality of output lines, the node comprising:

a first receiver that receives packets from a first input line, the first receiver including a first buffer arranged to receive data packets that contain one or more selected bits that meet a first predetermined criteria, and a second buffer arranged to receive at least some of the data packets that are not directed to the first buffer;

a first crossbar arranged to connect data packets from the first buffer with any of a plurality of output lines; and

a second crossbar arranged to connect data packets from the second buffer with any of the plurality of output lines, whereby packets received by the first input line may be transmitted to an appropriate output line through either the first or second crossbar.

32. (Previously presented) A routing node as recited in claim 31 comprising a plurality of receivers, each receiver being arranged to receive packets from an associated input line, and wherein each receiver has associated first and second buffers, each first buffer being coupled to the first crossbar and each second buffer being coupled to the second crossbar.

33. (Previously presented) A routing node as recited in claim 32 wherein each receiver is arranged to peek at a designated stripe bit in each data packet received by the

receiver, wherein if the stripe bit is a designated value, the data packet is passed to the first data buffer.

34. (Previously presented) A routing node as recited in claim 33 wherein if the stripe bit is not the designated value, the data packet is passed to the second data buffer.